

WHAT IS CLAIMED IS:

1. A method for treating or preventing adverse consequences of systemic inflammatory response syndrome (SIRS) in a mammal in need of the treatment, said method comprising administering to said mammal an amount of an inhibitor of adenosine deaminase (ADA) effective to ameliorate symptoms of the syndrome, wherein said effective amount causes inhibition of up to 100% of the normal values of ADA and the inhibition is delivered locally.
2. The method of claim 1, wherein the symptoms of the syndrome comprise an inflammatory response and to ameliorate the symptom is to decrease it.
3. The method of claim 1, wherein the symptoms of the syndrome comprise oxygen free radical-mediated tissue injury, and to ameliorate the symptom is to reduce it.
4. The method of claim 1, wherein the inhibitor is pentostatin.
5. The method of claim 1, wherein the inhibitor is EHNA.
6. The method of claim 1, where the inhibitor is ARADS.
7. The method of claim 1, wherein the symptoms of the syndrome comprise tissue perfusion maldistribution, and to ameliorate the symptom is to redistributed appropriately.
8. The method of claim 1, wherein the symptoms of the syndrome comprise increased vascular leakage, and to ameliorate the symptom is to reduce it.
9. The method of claim 1, wherein SIRS results from non-infectious origins.
10. The method of claim 1, wherein treatment is for no more than 3 consecutive days.
11. The method of claim 10, wherein the treatment is for periods of no more than 72 consecutive hours.
12. The method of claim 1, wherein the symptoms of the syndrome comprise an imbalance between pro-inflammatory and anti-inflammatory responses, and the method ameliorates the symptoms by restoring balance.
13. The method of claim 1, wherein the symptoms include multiple organ failure, and the method reduces the number or extent of organ failures.

14. The method of claim 1, wherein the symptoms comprise excessive extravasation of fluid and vascular proteins (capillary leakage), and the method reduces capillary leakage.

15. A pharmaceutical composition used for the treatment or preventing of
5 systemic inflammatory response syndromes (SIRS), said composition comprising an
amount of an inhibitor of adenosine deaminase sufficient to inhibit up to 100% of
adenosine deaminase activity when administered for no more than 3 consecutive days.

16. Use of an adenosine deaminase inhibitor to increase levels of adenosine locally and in a regionally selective manner in a mammal affected by an inflammatory condition.